WHAT IS CLAIMED IS:

multiplex network; and

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1. A transmission method for converting a packet frame of a user into a synchronous frame and transmitting said synchronous frame by a time division multiplex network, the method comprising the step of:

allocating a time-division multiplex transmission band to said user according to a channel band of said packet frame of said user.

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2. A transmission device comprising:

converting means for converting a packet
frame of a user into a synchronous frame so as to
transmit said synchronous frame by a time division

transmission-band allocating means for allocating a time-division multiplex transmission band to said user according to a channel band of said packet frame of said user.

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3. The transmission device as claimed in claim 2, wherein said converting means maps said packet frame of said user to a payload of a minimumunit synchronous frame of a plurality of paths in bytes.

4. The transmission device as claimed in claim 2, wherein said converting means maps said packet frame of said user to a payload of a minimumunit synchronous frame of a plurality of paths in units corresponding to a number of bytes of said payload.

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5. The transmission device as claimed in claim 2, wherein said converting means maps said packet frame of said user to a payload of a minimumunit synchronous frame of a plurality of paths in units corresponding to a number of bytes of said packet frame.

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6. The transmission device as claimed in claim 5, wherein said converting means maps said packet frame of said user to the payload of the minimum-unit synchronous frame of the paths excluding a troubled path when a trouble occurs in any of said paths.

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7. The transmission method as claimed in claim 1, wherein said packet frame of said user is transmitted through a gigabit LAN.

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8. The transmission method as claimed in claim 1, wherein said time division multiplex network is a SONET (Synchronous Optical Network).

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- 9. The transmission device as claimed in claim 2, wherein said packet frame of said user is transmitted through a gigabit LAN.
- 10. The transmission device as claimed in claim 2, wherein said time division multiplex network is a SONET (Synchronous Optical Network).